



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D3455-1

Job Sheet 168591



Part No: D3455-1

Job Qty: 30 ea

Part Name: Spacer



Part Weight: 0 lbs

Status: Scheduled

Priority: High

Job Created: 11/17/17

Job Tracking No:

Due Date: 11/21/17

Created By: Sylvie Boucher

Type: Stock

Description:

Customer: Transport Canada (CTRAN06)

Accounts Payable, Unit AFFA, 330 Sparks Street Ottawa, ON, K1V 0N5 Canada ph:(613) 998-3145

Note: DWG REV A IPP REV. A 05.11.17 NEW ISSUE EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	30 Ea		11/20/17	0.00	0.00	Start Up Machining		
100	Hardinge	30 pcs		11/21/17	0.00	0.92	Hardinge		
120	QC	30 pcs		11/21/17	0.00	0.00	QC8		
150	Packaging	30 pcs		11/21/17	0.00	0.00	Packaging3	5+ 030	
160	QC21-SA	30 Ea		11/21/17	0.00	0.00	QC21		

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	MDELRLNR1.000	1	10	0	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Spacer	0.453inches	+ 0.005 - 0.000	0.458 0.453	
2	Spacer	1.000inches	+ 0.010 - 0.001	1.010 0.999	
3	Spacer	0.065inches	± 0.010	0.075 0.055	

Plex 11/17/17 2:23 PM dart.boucher.sylvie

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



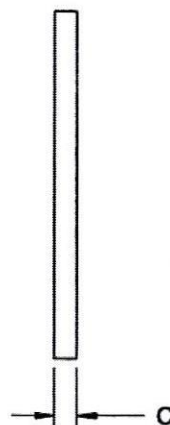
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use as is ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Cross tube ☐ Small Fab ☐ Water Jet ☐ Prod Eng. Corr. ☐ Engineering ☐ Quality ☐ Other ☐																																																															
Date : _____		Step #: _____		Job No: 168591 Mfg Date: 11/18/17 D3455 - 1 Start up Operation Revision: _____ Operation: _____ Change No: _____ PART NO: _____ Spacer S011120 DART AEROSPACE 1270 Aberdeen Street Hawkesbury, ON K6A 1K7 CANADA TEL: 1 613 632-5200 Email: sales@dartaero.com www.dartaerospace.com Dart Aerospace Ltd.																																																															
Description Work Order Deviation																																																																			
Root Cause <table border="1" style="width:100%; border-collapse: collapse;"><tr><td style="width:50%;">Environment ☐</td><td style="width:50%;">No Re-verification ☐</td></tr><tr><td>Design ☐</td><td>Operator ☐</td></tr><tr><td>Doc/Data ☐</td><td>Offset/Setup ☐</td></tr><tr><td>Equip/Tooling ☐</td><td>Supplier ☐</td></tr><tr><td>Handling/Pre ☐</td><td>Training ☐</td></tr><tr><td>Material ☐</td><td>Use for Testing ☐</td></tr><tr><td>Internal Transport ☐</td><td>Poor Information ☐</td></tr><tr><td>Tribal Knowledge ☐</td><td>Rushing ☐</td></tr><tr><td>LOA ☐</td><td>Product Improvement ☐</td></tr><tr><td>Substation ☐</td><td>Process Improvement ☐</td></tr><tr><td>Past Expiry Date ☐</td><td>Manufacturing Process ☐</td></tr><tr><td>Misidentified ☐</td><td>Past Due ☐</td></tr></table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	<table border="1" style="width:100%; border-collapse: collapse;"><tr><td style="width:50%;">Pressure/Force ☐</td><td style="width:50%;">BOM/Route ☐</td></tr><tr><td>Bending ☐</td><td>Broken/Damage/Defect ☐</td></tr><tr><td>Centre Not Concentric ☐</td><td>Inspection Incomplete/Unqualified ☐</td></tr><tr><td>Cracks ☐</td><td>Contamination ☐</td></tr><tr><td>Crimp/Kink/Ripple/Wave ☐</td><td>Countersink ☐</td></tr><tr><td>Cuffs ☐</td><td>Cut Too Short ☐</td></tr><tr><td>Crushing ☐</td><td>Instructions Incomplete/Unclear ☐</td></tr><tr><td>Heat Treat ☐</td><td>Drill Holes ☐</td></tr><tr><td>Wave/Twist in Tube ☐</td><td></td></tr><tr><td>Marks/Chatter ☐</td><td></td></tr></table>		Pressure/Force ☐	BOM/Route ☐	Bending ☐	Broken/Damage/Defect ☐	Centre Not Concentric ☐	Inspection Incomplete/Unqualified ☐	Cracks ☐	Contamination ☐	Crimp/Kink/Ripple/Wave ☐	Countersink ☐	Cuffs ☐	Cut Too Short ☐	Crushing ☐	Instructions Incomplete/Unclear ☐	Heat Treat ☐	Drill Holes ☐	Wave/Twist in Tube ☐		Marks/Chatter ☐		<table border="1" style="width:100%; border-collapse: collapse;"><tr><td style="width:50%;">Follow/Program ☐</td><td style="width:50%;">Outside Dimensions ☐</td></tr><tr><td>Grain ☐</td><td>Over/Under tolerance ☐</td></tr><tr><td>Weld ☐</td><td>Part Incorrect ☐</td></tr><tr><td>Wrong Stock Pulled ☐</td><td>Part Lost/Missing ☐</td></tr><tr><td>Out of Sequence ☐</td><td>Part Moved ☐</td></tr><tr><td>Off-set ☐</td><td>Drawing ☐</td></tr><tr><td>Mislabeled ☐</td><td>Finish ☐</td></tr><tr><td>Fit/Function ☐</td><td>Misread ☐</td></tr><tr><td>Misaligned/off center ☐</td><td>Turning Sequence ☐</td></tr></table>		Follow/Program ☐	Outside Dimensions ☐	Grain ☐	Over/Under tolerance ☐	Weld ☐	Part Incorrect ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Out of Sequence ☐	Part Moved ☐	Off-set ☐	Drawing ☐	Mislabeled ☐	Finish ☐	Fit/Function ☐	Misread ☐	Misaligned/off center ☐	Turning Sequence ☐
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DART

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3455	REV. A SHEET 1 OF 1
DATE 05.09.02		TITLE SPACER	SCALE 2:1
A	05.09.02	NEW ISSUE	

RELEASED05.12.09 *[Signature]* $\phi A^{+0.005}_{-0.000}$ ϕB **D3455-X**1) SPECIFICATION: **D3455-X SPACER**

DASH No.

WHERE 'X' IS THE SIZE PER THE FOLLOWING TABLE:

DASH No.	A (in)	B (in)	C (in)
-1	0.453	1.00	0.065
-3	0.386	1.00	0.050

NOTES:

- 1) MATERIAL: DELRIN ROUND BAR (REF. DART SPEC. M-DELRIN-R)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.010

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SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 168591 30
9-89
NOV 16 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					